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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,178	02/22/2006	Guofu Zhou	US 030293	1720
24737	7590	10/31/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			FANG, JERRY C	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/569,178	Applicant(s) ZHOU ET AL.	
	Examiner Jerry Fang	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-21 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/22/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10, and 12-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Katase (US 2002/0005832).

Regarding claim 1, Katase discloses determining an image holding time for at least one pixel in the bi-stable display (Fig. 3, 400 and Para. 0069); determining an energy with which to provide an compensating impulse according to the image holding time (Claim 12); and applying a drive waveform including the compensating impulse to the at least one pixel to update the at least one pixel (Fig. 19).

Regarding claim 2, Katase discloses wherein the bi-stable display comprises an electrophoretic display (Fig. 2 and Abstract).

Regarding claim 3, Katase discloses wherein the determining of the energy comprises determining the energy with which to provide the compensating impulse as a predetermined function of the image holding time (Claim 12).

Regarding claim 4, Katase discloses wherein the predetermined function of the image holding time is determined by measuring brightness as a function of impulse energy for different image holding times (Para. 0115).

Regarding claim 5, Katase discloses wherein the determining of the image holding time for the at least one pixel comprises measuring the image holding time for the at least one pixel (Para. 0266).

Regarding claim 6, Katase discloses wherein a polarity of the compensating impulse is selected to cause particles in the bi-stable display to move in a direction resulting in an initial optical state of the at least one pixel (Figs. 4A and 4B).

Regarding claim 7, Katase discloses wherein the compensating impulse is provided in the drive waveform prior to all data pulses (Claim 12 and Abstract).

Regarding claim 10, Katase discloses providing data defining different waveforms for respective different image holding times; wherein the applying the drive waveform comprises selecting one of the different waveforms to apply to the at least one pixel based on the determined image holding time (Fig. 19 and Para. 0152-0155).

Regarding claim 12, Katase discloses wherein the data defining the different waveforms includes data for scaling a standard compensating impulse according to the determined energy (Fig. 19 and Para. 0115).

Regarding claim 13, Katase discloses wherein the providing data defining different waveforms comprises providing data for substantially equal increments of brightness associated with the respective different image holding times (Para. 0115).

Regarding claim 14, Katase discloses determining an image holding time for at least one pixel in the bi-stable display (Fig. 3, 400 and Para. 0069); determining an energy with which to provide a compensating impulse according to the image holding time (Claim 12); and applying a drive waveform including the compensating impulse to the at least one pixel to update the at least one pixel (Fig. 19).

Regarding claim 15, Katase discloses a bi-stable display (Fig. 2); a control for updating an image on the bi-stable display by determining an image holding time for at least one pixel in the bi-stable display (Fig. 3, 400 and Para. 0069), determining an energy with which to provide a compensating impulse according to the image holding time (Claim 12), and applying a drive waveform including the compensating impulse to that at least one pixel to update the at least one pixel (Fig. 19).

Regarding claim 16, Katase discloses wherein the bi-stable display comprises an electrophoretic display (Fig. 2 and Abstract).

Regarding claim 17, Katase discloses wherein the control determines the energy with which to provide the compensating impulse as a predetermined function of the image holding time (Claim 12).

Regarding claim 18, Katase discloses wherein the predetermined function of the image holding times is determined by measuring brightness as a function of impulse energy for different image holding times (Para. 0115).

Regarding claim 19, Katase discloses providing data defining different waveforms for respective different image holding times; wherein the applying the drive waveform comprises selecting one of the different waveforms to apply to the at least one pixel based on the determined image holding time (Fig. 19 and Para. 0152-0155).

Regarding claim 20, Katase discloses wherein the providing data defining different waveforms comprises providing data for substantially equal increments of brightness associated with the respective different image holding times (Para. 0115).

Regarding claim 21, Katase discloses first means for determining an image holding time for at least one pixel in a bistable display (Fig. 3, 400 and Para. 0069),

second means for determining, according to the image holding time, an energy of a compensating impulse (Fig. 3, 300A) and third means for applying a drive waveform including the compensating impulse to the at least one pixel to update the at least one pixel (Fig. 3, 130).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katase (US 2002/0005832) in view of Zehner et al. (US 2003/0137521).

Regarding claim 11, Katase failed to disclose storing the data defining the different waveforms in respective look-up tables. Zehner discloses storing the data defining the different waveforms in respective look-up tables (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to store the data defining the different waveforms in respective look-up tables as taught by Zehner, with the optical device of Katase, since as shown by Zehner, the data defining the different waveforms is commonly stored in the look-up tables in order to enhance the performance of an optical device.

Allowable Subject Matter

Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The allowable features being: the compensating impulse is provided in the drive waveform following a shaking pulse, and prior to a reset pulse (Claim 8); the compensating pulse is provided in the drive waveform immediately preceding, and adjacent to, an extreme drive pulse (Claim 9).

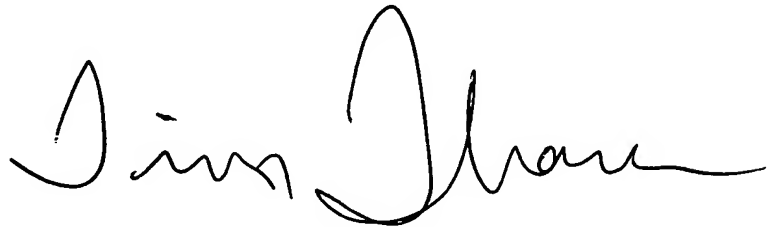
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Fang whose telephone number is 5712726013. The examiner can normally be reached on 10-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 5712722333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.F.
10/26/2006

A handwritten signature in black ink, appearing to read "Tim Thompson", written in a cursive style.

TIMOTHY THOMPSON
PRIMARY EXAMINER

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